



SEQUENCE LISTING

<10> Mirkin, Chad A.
 Letsinger, Robert L.
 Mucic, Robert C.
 Storhoff, James J.
 Elghanian, Robert
 Taton, Thomas A.

<120> NANOPARTICLES HAVING OLIGONUCLEOTIDES ATTACHED THERETO
 AND USES THEREFOR

<130> 00-713-i15

<140> 09/975,059
 <141> 2001-10-11

<150> 09/603,830
 <151> 2000-06-26

<150> 09/344,667
 <151> 1999-06-25

<150> 09/240,755
 <151> 1999-01-29

<150> PCT/US97/12783
 <151> 1997-07-21

<150> 60/031,809
 <151> 1996-07-29

<150> 60/200,161
 <151> 2000-04-26

<160> 64

<170> Microsoft Word 2000

<210> 1
 <211> 20
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence:random
 synthetic sequence

<400> 1
 aaacgactct agcgcgtata

<210> 2
 <211> 20
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence:random

20

synthetic sequence

<400> 2
atggcaacta tacgcgctag 20

<210> 3
<211> 16
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:random
synthetic sequence

<400> 3
ccttgagatt tccctc 16

<210> 4
<211> 16
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:random
synthetic sequence

<400> 4
gagggaaatc tcaagg 16

<210> 5
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:random
synthetic sequence

<400> 5
aacttgcgct aatggcga 18

<210> 6
<211> 26
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:random
synthetic sequence

<400> 6
aagttgcgct ttacggctaa tggcga 26

<210> 7

```

<211> 15
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:random
        synthetic sequence

<400> 7
tctccttccc ttttc
15

<210> 8
<211> 15
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:random
        synthetic sequence

<400> 8
gaaaagggaa ggaga
15

<210> 9
<211> 15
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:random
        synthetic sequence

<400> 9
cttttccctt cctct
15

<210> 10
<211> 28
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:random
        synthetic sequence

<400> 10
aaacgactct agcgcgtata gttgccat
28

<210> 11
<211> 28
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:random
        synthetic sequence

```

<400> 11 atggcaacta tacgcgctag agtcgttt	28
<210> 12 <211> 15 <212> DNA <213> Artificial Sequence	
<220> <223> Description of Artificial Sequence:random synthetic sequence	
<400> 12 cctatcgacc atgct	15
<210> 13 <211> 30 <212> DNA <213> Artificial Sequence	
<220> <223> Description of Artificial Sequence:random synthetic sequence	
<400> 13 agcatggtcg ataggaaacg actctagcgc	30
<210> 14 <211> 15 <212> DNA <213> Artificial Sequence	
<220> <223> Description of Artificial Sequence:random synthetic sequence	
<400> 14 gcgctagagt cgttt	15
<210> 15 <211> 30 <212> DNA <213> Artificial Sequence	
<220> <223> Description of Artificial Sequence:random synthetic sequence	
<400> 15 agcatggtcg ataggatggc aactatacgc	30
<210> 16 <211> 24	

<212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence:random
 synthetic sequence

 <400> 16
 gtcgatagga aacgactcta gcgc 24

 <210> 17
 <211> 30
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence:random
 synthetic sequence

 <400> 17
 agcatggttg ataggaaacg actctagcgc 30

 <210> 18
 <211> 30
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence:random
 synthetic sequence

 <400> 18
 agcatgtttg ataggaaacg actctagcgc 30

 <210> 19
 <211> 12
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence:random
 synthetic sequence

 <400> 19
 tctcaactcg ta 12

 <210> 20
 <211> 12
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence:random
 synthetic sequence

<400> 20
 cgcattcagg at 12

<210> 21
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence:random
 synthetic sequence

<400> 21
 tacgagttga gagagtgcc acat 24

<210> 22
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence:random
 synthetic sequence

<400> 22
 tacgagttga gaatcctgaa tgcg 24

<210> 23
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence:random
 synthetic sequence

<400> 23
 tacgagttga gaatcctgaa tgct 24

<210> 24
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence:random
 synthetic sequence

<400> 24
 tacgagttga gactcctgaa tgcg 24

<210> 25
 <211> 23
 <212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:random
synthetic sequence

<400> 25

tacgagttga gaatcctgaa tgc

23

<210> 26

<211> 25

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:random
synthetic sequence

<400> 26

tacgagttga gacatcctga atgcg

25

<210> 27

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:random
synthetic sequence

<400> 27

tacgagttga gaatcctgaa tgcg

24

<210> 28

<211> 12

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:random
synthetic sequence

<400> 28

taggacttac gc

12

<210> 29

<211> 48

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:random
synthetic sequence

<400> 29

tacgagttga gaccgttaag acgaggcaat catgcaatcc tgaatgcg 48

<210> 30
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence:random
 synthetic sequence

<400> 30
 tgcatgattg cctcgtctta acgg 24

<210> 31
 <211> 72
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence:random
 synthetic sequence

<400> 31
 tacgagttga gaccgttaag acgaggcaat catgcatata ttggacgctt tacggacaac 60
 atcctgaatg cg 72

<210> 32
 <211> 48
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence:random
 synthetic sequence

<400> 32
 gttgtccgta aagcgtccaa tatatgcatg attgcctcgt cttaacgg 48

<210> 33
 <211> 12
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence:random
 synthetic sequence

<400> 33
 tctcaactcg ta 12

<210> 34
 <211> 24
 <212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:random
synthetic sequence

<400> 34

tacgagttga gaatcctgaa tgcg

24

<210> 35

<211> 12

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:random
synthetic sequence

<400> 35

cgcattcagg at

12

<210> 36

<211> 141

<212> DNA

<213> anthrax

<400> 36

ggcggatgag tcagtagtta aggaggctca tagagaagta attaattcgt caacagaggg 60
attattgtta aatattgata aggatataag aaaaatatta tccagggtta tattgtagaa 120
attgaagata ctgaagggt t 141

<210> 37

<211> 15

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:random
synthetic sequence

<400> 37

taacaataat ccctc

15

<210> 38

<211> 15

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:random
synthetic sequence

<400> 38

atccttatca atatt

15

<210> 39
 <211> 30
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence:random
 synthetic sequence

 <400> 39
 tgagcctcct taactactga ctcacccgcc 30

 <210> 40
 <211> 25
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence:random
 synthetic sequence

 <400> 40
 tggtgacgaa ttaattactt ctcta 25

 <210> 41
 <211> 27
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence:random
 synthetic sequence

 <400> 41
 tataaccctg gataatattt ttcttat 27

 <210> 42
 <211> 29
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence:random
 synthetic sequence

 <400> 42
 aagcccttca gtatcttcaa tttctacaa 29

 <210> 43
 <211> 22
 <212> DNA
 <213> Artificial Sequence

 <220>

<223> Description of Artificial Sequence:random
synthetic sequence

<400> 43
tctcaactcg taaaaaaaaa aa 22

<210> 44
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:random
synthetic sequence

<400> 44
tacgagttga gaatcctgaa tgcg 24

<210> 45
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:random
synthetic sequence

<400> 45
aaaaaaaaaa cgcattcagg at 22

<210> 46
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:random
synthetic sequence

<400> 46
tctcaactcg taaaaaaaaa aa 22

<210> 47
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:random
synthetic sequence

<400> 47
aaaaaaaaaa cgcattcagg at 22

```

<210> 48
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:random
      synthetic sequence

<400> 48
tacgagttga gaatcctgaa tgcg                24

<210> 49
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:random
      synthetic sequence

<400> 49
ctacttagat ccgagtgccc acat                24

<210> 50
<211> 12
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:random
      synthetic sequence

<400> 50
cgcatcagg at                               12

<210> 51
<211> 32
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:random
      synthetic sequence

<400> 51
aaaaaaaaaa aaaaaaaaaa cgcatcagg at        32

<210> 52
<211> 32
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:random

```

synthetic sequence

<400> 52
cgcatcagg atwwwwwww wwwwwwww ww 32

<210> 53
<211> 12
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:random
synthetic sequence

<400> 53
atcctgaatg cg 12

<210> 54
<211> 12
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:random
synthetic sequence

<400> 54
atcctgaatg cg 12

<210> 55
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:random
synthetic sequence

<400> 55
aaaaaaaaa aaaaaaaaaa 20

<210> 56
<211> 27
<212> DNA
<213> Anthrax

<400> 56
ggattattgt taattattga taaggat 27

<210> 57
<211> 12
<212> DNA
<213> Anthrax

<400> 57 taacaatnat cc	12
<210> 58 <211> 15 <212> DNA <213> Anthrax	
<400> 58 atccttatca atatt	15
<210> 59 <211> 12 <212> DNA <213> Artificial Sequence	
<220> <223> Description of Artificial Sequence:random synthetic sequence	
<400> 59 tctcaactcg ta	12
<210> 60 <211> 24 <212> DNA <213> Artificial Sequence	
<220> <223> Description of Artificial Sequence:random synthetic sequence	
<400> 60 tacgagttga gaatcctgaa tgcg	24
<210> 61 <211> 48 <212> DNA <213> Artificial Sequence	
<220> <223> Description of Artificial Sequence:random synthetic sequence	
<400> 61 gcgtaagtcc taacgtacta acggagcaga attgccagag ttgagcat	48
<210> 62 <211> 72 <212> DNA <213> Artificial Sequence	
<220> <223> Description of Artificial Sequence:random	

synthetic sequence

<400> 62
gcgtaagtcc tacaacaggc atttcgcagg ttatatacgt actaacggag cagaattgcc 60
agagttgagc at 72

<210> 63
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:random
synthetic sequence

<400> 63
tgcattgattg cctcgtctta acgg 24

<210> 64
<211> 48
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:random
synthetic sequence

<400> 64
gttggtccgta aagcgtccaa tatatgcatg attgcctcgt cttaacgg 48